# LOS PEÑASQUITOS LAGOON AND WATERSHED SEDIMENT CONTROL PROGRAM

Agenda Item 13. September 25, 2001

#### COASTAL CONSERVANCY

**Project Summary** September 25, 2001

## LOS PEÑASQUITOS LAGOON AND WATERSHED SEDIMENT CONTROL PROGRAM

File No. 01-119 Project Manager: Jack Liebster

#### RECOMMENDED ACTION:

Authorization to disburse up to \$250,000 to the Los Peñasquitos Lagoon Foundation to conduct a hydrology study of the

Los Peñasquitos Watershed and Lagoon.

LOCATION: The Los Peñasquitos Lagoon is located in the city of San Diego adjacent to Torrey Pines State Reserve just south of the city of Del Mar. The lagoon watershed extends to the east, covering nearly 100 square miles across portions of the cities of San Diego and Poway, and the County of San Diego (Exhibits 1 and 2).

#### PROGRAM CATEGORY: Resource Enhancement

#### ESTIMATED COST:

Coastal Conservancy*	\$250,000
Los Peñasquitos Lagoon Foundation (LPLF)	10,000
State Water Resources Control Board	960,441
Total:	\$1,220,441

<sup>\*</sup> The anticipated source of the Conservancy's funds is the Los Peñasquitos Lagoon Special Deposit account, which holds funds collected by the Coastal Commission from applicants for commercial and residential projects in the watershed that could cause sediment run-off to the lagoon.

PROJECT SUMMARY: The proposed authorization would fund the development of a multi-objective hydrology study of the Los Peñasquitos Watershed and Lagoon to evaluate solutions to the sedimentation problems caused by extensive urbanization and industrial development in the western portion of the watershed over the past 20 years. The study will provide information (including freshwater flow rates, volumes, sediment loads, and current tidal

circulation patterns) necessary to design new sediment control facilities to be constructed with State Water Resources Control Board (SWRCB) Proposition 13 funding. The study results will also facilitate development of an updated, broadened Los Peñasquitos Lagoon Enhancement Plan and Program, and will help to improve ongoing monitoring studies related to future restoration and enhancement efforts in the lagoon and watershed.

In 1985 the Conservancy adopted the Los Peñasquitos Lagoon Enhancement Plan and Program to address the management needs for restoring and enhancing the natural state of Los Peñasquitos Lagoon. One of the key policies for implementing that Plan was controlling sedimentation that damages the lagoon. Plan element 3.3.7.3 specifically called for designing and implementing improvements in the tributary streams and watersheds to slow sedimentation. Since that time, urban development in the western portion of the watershed and along lagoon boundaries has accelerated dramatically, seriously increasing impacts to the lagoon, and increasing the urgency of implementing solutions.

The Los Peñasquitos Lagoon Foundation (LPLF) has been pursuing an integrated set of grant applications to develop such solutions. Recognizing the Lagoon's urgent needs, the State Water Resources Control Board and its Regional Board have recently allocated \$960,441 of Proposition 13 funds to the LPLF for the construction of sediment control projects. The LPLF's proposal to the Conservancy was developed to provide key hydrologic data required for the design of these projects, while at the same time providing the needed data to upgrade and expand the Los Peñasquitos Lagoon Enhancement Plan and Program to account for the radically changing conditions in its watershed.

The Southern California Wetlands Recovery Project has identified the proposed project as one of its current annual work program priorities.

#### COASTAL CONSERVANCY

Staff Recommendation September 28, 2001

### LOS PEÑASQUITOS LAGOON AND WATERSHED SEDIMENT CONTROL PROGRAM

File No. 01-119 Project Manager: Jack Liebster

#### STAFF

RECOMMENDATION: Staff recommends that the State Coastal Conservancy adopt the following Resolution pursuant to Sections 31251-31270 of Division 21 of the Public Resources Code:

> "The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed two hundred fifty thousand dollars (\$250,000) to the Los Peñasquitos Lagoon Foundation (LPLF) for the preparation of a sediment control and hydrology study to assist in the restoration and enhancement of the Los Peñasquitos Lagoon and its watershed in San Diego County. This authorization is subject to the condition that prior to the disbursement of any funds, the LPLF shall submit for the review and approval of the Conservancy's Executive Officer:

- 1. A work program, including schedule, budget, and deliverables:
- 2. Evidence of the commitment and availability of a minimum of \$10,000 of additional funds and in-kind services to be used toward the project; and
- 3. The names of any contractors it intends to use to conduct the studies."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the purposes and criteria in Chapter 6 of the Public Resources Code (Sections 31251-31270) regarding the enhancement of coastal resources;

- 2. The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001; and
- 3. Los Peñasquitos Lagoon Foundation is a private nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and having among its principal charitable purposes the preservation of land for scientific, historic, educational, recreational, scenic and open space opportunities."

## STAFF DISCUSSION: Project Description:

This project would develop a multi-objective hydrology study of the Los Peñasquitos Watershed and Lagoon to evaluate solutions to the sedimentation problems caused by extensive urbanization and industrial development in the western portion of the watershed over the past 20 years. The study will provide information (including freshwater flow rates, volumes, sediment loads, and current tidal circulation patterns) necessary to design new sediment control facilities to be constructed with State Water Resources Control Board (SWRCB) Proposition 13 funding to address the following habitat enhancement objectives:

- The reduction of sediment loads that alter natural tidal channels and degrade native salt marsh habitats;
- Reducing levels of turbidity associated with suspended solids and solids that can settle, that can create anaerobic conditions by adversely affecting photosynthesis on which aquatic organisms rely for survival;
- Reducing levels of organic and inorganic pollutants transported into the lagoon via sediment;
- Maintaining levels of dissolved oxygen, salinity, and temperature essential to the health of native marine species in Los Peñasquitos Lagoon;
- Reducing the nutrient loading to the lagoon that, together with reduced tidal mixing, stimulates algae blooms.

Work to be completed through the project will include reestablishing, replacing and adding stream flow gauges in critical locations of the three tributary sub-watersheds (Carmel, Carroll and Los Peñasquitos Creeks) and within lagoon channels, collection of data, developing and refining models in the water-

shed and the lagoon, and application of the results to the development of restoration projects.

In coordination with the development of sediment control facilities, the Los Peñasquitos Lagoon Foundation is currently undertaking an update and expansion of the 1985 Los Peñasquitos Lagoon Enhancement Plan and Program in response to the changing conditions in the lagoon and watershed. The proposed hydrology study will also facilitate development of this Plan update to address the restoration, enhancement, and protection of degraded habitats and other natural systems in Los Peñasquitos Lagoon and its watershed. Finally, results from the hydrology study will also be used to improve the accuracy and effectiveness of current monitoring studies focusing on water quality, vegetation, marine and terrestrial fauna, and sedimentation.

#### Project Financing:

Coastal Conservancy*	\$250,000
Los Peñasquitos Lagoon Foundation (LPLF)	10,000
State Water Resources Control Board	960,441
Total:	\$1,220,441

<sup>\*</sup> The anticipated source of the Conservancy's funds is the Los Peñasquitos Lagoon Special Deposit account, which holds funds collected by the Coastal Commission from applicants for commercial and residential projects in the watershed that could cause sediment run-off to the lagoon.

Site Description: The Los Peñasquitos Lagoon (LPL) is a 0.62-square-mile coastal lagoon that receives freshwater drainage from a 98.5square-mile watershed comprised of three major drainage basins (Carroll Canyon, Los Peñasquitos Canyon, and Carmel Canyon) (see Exhibit 1). Both the lagoon and its watershed are part of the Los Peñasquitos Lagoon Hydrological Unit and identified as a Category 1 (impaired) waterbody by the 1998 California Environmental Protection Agency's 303(d) list with sedimentation and siltation from nonpoint sources impacting over 380 acres (the largest area affected by any nonpoint source pollution in all San Diego region lagoons and watersheds, according to Cal. EPA data).

> Sediment buildup has particularly impacted the eastern portion of the lagoon and the lagoon channels. Rapid sedimentation in the lagoon/watershed interface has covered and destroyed fragile (and endangered) vegetation (e.g., the salt marsh daisy) indigenous to LPL and displaced native fauna that rely on spe-

cific vegetation cover for nesting. Evidence of these affects is visible along Sorrento Valley Road running parallel to I-5 South of Carmel Valley Road. Sediment deposition has also elevated the eastern portion of the lagoon above mean high tide levels, reducing tidal mixing in this region of the lagoon. The combination of these effects and the increased flow of fresh water have caused colonization by cattails (Typha spp.) that can be seen in the lagoon along Carmel Valley road near I-5. Rapid sedimentation in the lagoon, associated with current input levels of freshwater from the western portion of the watershed, plays a significant role in increasing the frequency and duration of mouth closures by impeding water flows that would, under natural conditions, help to facilitate natural openings of the lagoon mouth. Therefore, expensive mechanical dredging has often been the only option for maintaining an open lagoon mouth.

Project History: The Conservancy has been involved with Los Peñasquitos Lagoon (LPL) for nearly 20 years. The principal areas of concern have included threats to water quality, natural processes, and native habitats within the western portion of the Los Peñasquitos Watershed and the Lagoon itself due to increased sedimentation associated with rapid urban development and associated increases in impervious surfaces and year-round freshwater runoff in the watershed. The Conservancy has also funded projects to correct lagoon mouth closures related to shoreline modifications, changes to the hydrologic regime and historical filling of the lagoon. The Los Peñasquitos Lagoon Foundation has been one of the Conservancy's principal partners in the work. The Conservancy has also closely cooperated with State Parks, which owns and manages the Torrey Pines Natural Reserve that incorporates much of the Lagoon.

> The Conservancy developed and in 1985 adopted the Los Peñasquitos Lagoon Enhancement Plan and Program ("LPL Enhancement Plan") to address the management needs for restoring and enhancing the natural state of LPL. During that time, the California Coastal Commission began requiring fees from development approved in the Coastal Zone within the Los Peñasquitos Lagoon watershed to mitigate runoff impacts to the Lagoon. The Los Peñasquitos Lagoon Enhancement Fund (LPLEF), administered by the Conservancy, is the repository of deposits received from these fees. A similar system of development fees was incorporated in the City of San Diego Local Coastal Program Implementing Ordinance adopted April 18, 1988.

Fees deposited into the Fund are used to cover expenditures related to the enhancement and restoration of Los Peñasquitos Lagoon, including property acquisition and other activities to mitigate the impact to the Lagoon caused by development in its watershed. Funds are paid to government agencies and non-profit organizations performing this work.

The Fund has been used over the past 15 years to support activities identified in the LPL Enhancement Plan, particularly opening the lagoon mouth and monitoring of lagoon waters and habitats.

However, as urban development in the western portion of the watershed and along lagoon boundaries has increased at accelerating rates, the control of sedimentation is even more critical today than it was in 1985. Consequently, the SWRCB has awarded the LPLF Prop. 13 funds for the construction of sediment retention basins in the watershed. These facilities would implement a critical element of the LPL Enhancement Plan:

#### 3.3.7 CONTROLLING SEDIMENTATION

#### 3.3.7.3

Design in-stream improvements that would decrease erosion and slow downstream sedimentation. Estimate the cost of conserving, restoring, and maintaining stream channels, and identify sediment sources. Reevaluate the desirability of a facility to remove sediment at the lower end of Carmel Valley. Also reevaluate the costs, possible financing mechanisms, locations and environmental effects of sedimentation basins in Carroll Canyon and Los Peñasquitos Canyon.

As identified by the LPL Enhancement Plan, minimizing the impacts caused by large sediment flows is crucial for maintaining the health of the natural resources and systems of the LPL. The proposed hydrological study is the key first step in achieving these objectives.

PROJECT SUPPORT: Letters of support will be sent separately or hand-carried to the Conservancy's September meeting.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270) authorizes the Conservancy to award

grants to public agencies and nonprofit organizations for enhancement projects for several purposes, including the enhancement of coastal resources that have suffered loss of natural or scenic values because of natural or human-induced events. The proposed project is consistent with the specific purposes of Chapter 6, as set forth in Section 31251. It serves to promote the enhancement of wetland and riparian resources at Los Peñasquitos Creek and Lagoon by providing the detailed hydrological information critical to appropriately addressing siltation, one of the major sources of degradation of the Los Peñasquitos Lagoon and a condition acerbated by urban development and associated increased run-off and erosion. The proposed study also will provide information equally needed to define and assist in future enhancement of the natural and scenic character of the area, and the ability of the watershed to support endangered species.

The upper portion of the Los Peñasquitos watershed is located partially outside of the coastal zone. Section 31251.2(a) authorizes the Conservancy to undertake a project that is partly outside of the coastal zone in order to enhance the natural or scenic character of coastal resources within the coastal zone.

Section 31252 requires that the area proposed for enhancement projects be identified in a local coastal program (LCP) as an area requiring public action to resolve existing resource protection problems. The City of San Diego's certified LCP, Section 126.0720, specifically identifies the Los Peñasquitos Lagoon and its watershed as an impacted resource requiring intervention to offset the impacts of urbanization and establishes the LPL Enhancement Fund to accomplish that objective.

Section 31253 permits the Conservancy to provide up to the total cost of any coastal resource enhancement project, consistent with established project eligibility and priority factors. As discussed below, this project is consistent with the Conservancy's adopted Project Selection Criteria and Guidelines. Moreover, Conservancy funds will be matched by other support at a 4 to 1 ratio.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

CRITERIA & GUIDELINES: The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

#### Required Criteria

**Promotion of the Conservancy's Statutory Programs and Purposes:** As described in the paragraphs above, the proposed project is consistent with Sections 31251-31253 of Chapter 6 of the Conservancy's enabling legislation (Division 21 of the Public Resources Code) regarding coastal resource enhancement projects.

Consistency with Purposes of the Funding Source: The source of Conservancy funds for the proposed project will likely be the Los Peñasquitos Lagoon Special Deposit Account. This account was specifically established to hold funds collected by the Coastal Commission from applicants for commercial and residential projects in the watershed. The funds are to be used for Los Peñasquitos "bona fide lagoon enhancement activities" including, as here, preparation of background technical studies for the implementation of the Los Peñasquitos Lagoon Enhancement Plan. Conservancy staff is seeking the concurrence of the Executive Director of the Coastal Commission that the proposed project qualifies as an appropriate enhancement activity for which the Special Deposit Account funds may be disbursed. It is anticipated that such concurrence will be provided in the immediate future.

**Support:** The proposed project has broad community and agency support. Letters evidencing that support will be sent separately or hand-carried to the Conservancy's September meeting. In addition, the SCWRP Board of Governors adopted the proposed project as part of the SCWRP 2000-2001 Work Plan.

**Location:** Most of the proposed project area is within the coastal zone. To the extent that the project involves some activities outside of the coastal zone, those activities are intended and will serve to directly enhance the natural or scenic character of coastal resources within the coastal zone.

Need: The financial support and participation of the Conservancy are critical for the success of this project. The Los Peñasquitos Lagoon Foundation has sought support from different sources for specific elements of an integrated effort to solve the problems of the Lagoon and Watershed. They sought funding for the hydrologic analysis and design studies from the Conservancy through the WRP process. At the same time, they applied to the SWRCB to reserve funds to implement the solutions recommended by that design process. In this case, the SWRCB has acted first, conditionally granting funds for the

construction of sediment control facilities. The Conservancy's funds are needed to complement and take advantage of that opportunity.

Greater-than-Local Interest: The project area includes Los Peñasquitos Lagoon, which is part of Torrey Pines State Reserve, a unit of the State Parks system that serves regional, statewide, and national interest. The Lagoon is one of the last areas of southern California wetlands, highly productive biological resources that have literally been decimated in the last 100 years. As nursery grounds for both commercial and sport fish, these wetlands are important to the regional economy and recreation. Moreover, they have international significance as critical nesting, feeding, and breeding grounds for birds on the Pacific Flyway

#### **Additional Criteria**

**Significance:** The proposed project represents an opportunity to restore the types of creek and lagoon-associated wetland and riparian habitat that once existed along coastal southern California, but has been severely diminished as the result of urban development.

Leverage: Conservancy support would allow multiple objectives to be accomplished in a single project. Results from this study will improve the accuracy and effectiveness of ongoing monitoring studies, fill data gaps that will facilitate the completion of the updated, expanded version of the 1985 Los Peñasquitos Lagoon Enhancement Plan and Program, while simultaneously providing needed information to design and implement necessary sediment control facilities. The Conservancy's funds will be matched by a factor of nearly 400 percent.

## CONSISTENCY WITH THE COASTAL ACT:

The proposed project is consistent with the planning and management policies contained in Section 30231 of the Public Resources Code, which states that "the biological productivity and the quality of coastal waters, streams, wetlands, estuaries and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored. . . ." The objective of the project is to restore the coastal wetlands and streams of Los Peñasquitos Lagoon and watershed.

Exhibit 3: Previous Staff Recommendation

#### COMPLIANCE

WITH CEQA: The Conservancy's project involves only the funding for the hydrology studies. The proposed project is statutorily exempt from the provisions of CEQA under 14 California Code of Regulations Section 15262 in that it involves only project feasibility analyses and studies for possible future actions. Staff will file a Notice of Exemption upon approval of the proposed authorization

### **EXHIBIT 3**

## **Letters of Support**

Letters will be mailed separately and/or hand-carried to the meeting.